EXECUTIVE SUMMARY

INTRODUCTION

An Environmental Impact Statement (EIS) is an environmental disclosure document prepared by the Federal agency responsible for approving a Proposed Federal Action, in compliance with the requirements of the National Environmental Policy Act of 1969 (NEPA). In this case, the Federal Aviation Administration (FAA) is responsible for the following proposed actions:

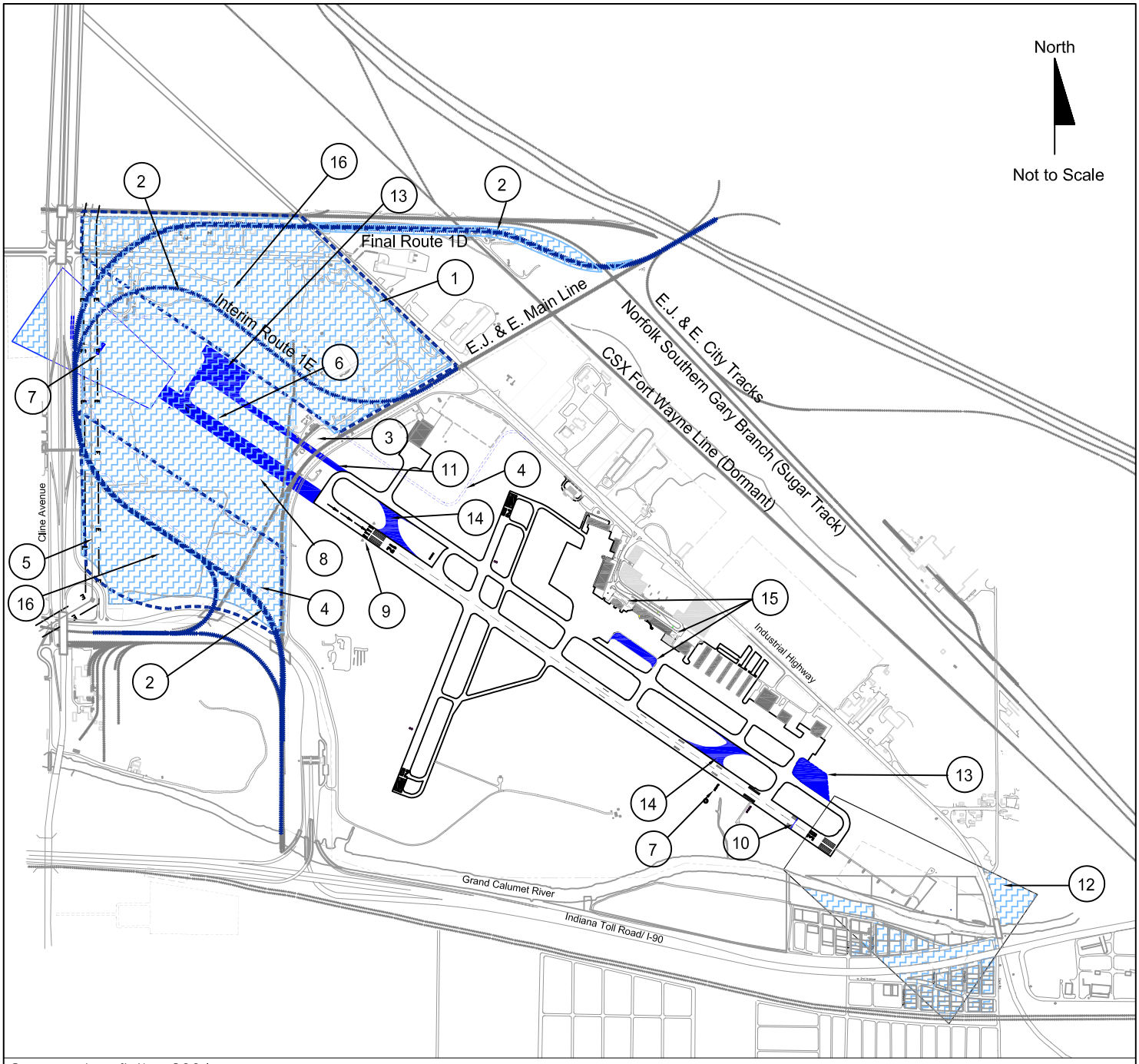
- Federal unconditional approval of the 2001 Airport Layout Plan for Gary/Chicago International Airport.
- Federal environmental approval necessary to proceed with processing of an application for Federal funding for those development items qualifying under the Airport and Airway Improvement Act as amended, and recodified at 49 USC § 47101 et. Seq. and/or an approval to use Passenger Facility Charges.
- Federal environmental approval necessary for installation and/or relocation, certification and operation of navigation aids and revisions of associated Standard Instrument Approach Procedures (SIAP). Also, design, development, approval, and implementation of air traffic procedures consistent with the assumptions set forth in this document.
- FAA review and issuance of findings on requests for conversion of airport property, "Federally obligated land" for the non-aviation related development that is part of the Proposed Projects. Airport land becomes Federally obligated when an airport owner accepts FAA grants. Before conversion of airport property for non-aviation use, the FAA must grant a land release.

This EIS has been prepared in accordance with FAA Orders 1050.1, *Policies and Procedures for Assessing Environmental Impacts*[1] and 5050.4, *Airport Environmental Handbook*[2].

PROPOSED ACTION FOR GARY/CHICAGO INTERNATIONAL AIRPORT

In order for the Gary/Chicago International Airport to meet the needs of existing and future users and to conform to FAA standards, the Proposed Actions are being pursued by the Gary/Chicago Airport Authority and are numbered and summarized below (as also shown in **Exhibit ES-1**).

[1] Federal Aviation Administration, Executive Order 1050.1D, *Policies and Procedures for Assessing Environmental Impacts*, December 21, 1983.
[2] Federal Aviation Administration, Executive Order 5050.4A, *Airport Environmental Handbook*, October 8, 1985.



Source: Aerofinity, 2004

1	Acquire Land Northwest of Airport
2	Relocate E.J. & E. Railroad Interim and Final Routes (including modification to Cline Avenue frontage road)
3	Modify On-Going Cleanup
4	Relocate Airside Perimeter Road and Southwest Access Road
5	Bury Powerline
6	Extend Runway 12-30
7	Relocate Navaids for Runway 12-30
8	Interim Safety Area Improvements
9	Threshold Improvements Runway 12
10	Displace Runway 30 Threshold using Declared Distance
11	Extend Parallel Taxiway A
12	Acquire Land Southeast of Airport
13	Construct Deicing/ Hold Pads
14	Develop Two High Speed Exit Taxiways
15	Passenger Terminal Expansion at Existing Terminal Site
16	Analysis of Sites for Future Aviation-Related Uses-Passenger Terminal and Air Cargo Facilities

Gary/Chicago International Airport
Chicago's Best Approach!

EXHIBIT ES-1
Proposed Improvements

April 8, 2004

- Improvements to existing Runway 12-30 to conform with current FAA Standards, the primary air carrier runway at the Gary/Chicago International Airport: 1) acquire land northwest of airport to allow for modifications to runway safety area (RSA); 2) relocate EJ&E Railway, with phased relocation; 3) modify ongoing cleanup activities for compatibility; 4) relocate airside perimeter roadway (including addition of southwest access road); 5) bury transmission line; 6) extend Runway 12 to the northwest (approximately 546 feet by 150 feet); 7) relocate Runway 12-30 navaids; 8) improve/grade RSA for Runway 12 (approximately 1,100 feet); 9) relocate Runway 12 threshold to remove prior displacement; 10) displace Runway 30 threshold using declared distance standards approximately 546 feet to the northwest to improve Runway 30 RSA; 11) extend parallel Taxiway A to new end of Runway 12; and 12) acquire land southeast of airport, located within or immediately adjacent to runway protection zone (RPZ). These airside improvements are needed to increase the margin of safety and to conform to FAA standards.

- Improvements to provide additional runway length on Runway 12-30 (proposed to occur simultaneously with and requiring accomplishment of the improvements to conform to FAA standards described above): acquire additional land or rights northwest of existing runway; extend Runway 12-30 to the northwest (up to approximately 1,354 feet by 150 feet); relocate Runway 12 navaids; extend parallel Taxiway A to new end of Runway 12; 13) construct deicing hold pads on Taxiway A at the ends of Runway 12 and Runway 30; 14) develop two high-speed exit taxiways; improve/grade extended Runway 12 safety area (approximately 1,100 feet); relocate Runway 12 threshold to end of extended runway pavement. These airside improvements will increase the margin of safety for users of the Gary/Chicago International Airport and conform to FAA standards, while providing a facility that effectively and efficiently meets the demands of the existing users and forecast low-growth activity.

- Expansion of existing passenger terminal and apron (15) to accommodate projected demands, based upon the low case forecast, through the year 2020. For the Proposed Action, the terminal building expansion will either be an addition of a second story to the east or 1-story expansion both to the east and to west. With an expansion to the west, the terminal building may either encompass the current ARFF facility or require its relocation (possible but not expected to occur at this time nor is it expected to occur in the foreseeable future.)

- Analysis of sites adjacent to extended Runway 12-30 for aviation related development (16), including new passenger terminal and air cargo areas, in order to acquire and/or reserve these areas for the long-term. It is recognized that the purpose and need for the actual development of these more-extensive infrastructure has not been demonstrated at this time. Based upon the FAA's forecast review and given the long lead-time for major facility improvements, the Gary/Chicago Airport Authority has identified and reserved areas on their 2001 Airport Layout Plan to locate facilities to accommodate a higher case activity growth in the areas of air cargo and scheduled air service. The site analysis for these areas will be included in the EIS in order to consider the environmental impacts before the Gary/Chicago Airport Authority decides to acquire

and/or reserve these areas for future aviation-related uses. The actual development of the site would be defined as the need arises and subject to a separate environmental review at that time.

BACKGROUND

The Gary/Chicago International Airport is a commercial service primary airport[3] located in Northwest Indiana. Southeast Airlines provides service as a Federal Aviation Regulations Part 121 supplemental carrier from Gary/Chicago International Airport to Florida with MD-80 and DC-9 aircraft. In February 2004, service was initiated to St. Petersburg with four flights per week. A second Florida destination (Orlando) will be served from Gary/Chicago International Airport in May 2004, with a total of eleven flights per week anticipated at that time.

The existing airfield configuration at Gary/Chicago International Airport consists of two active runways. Runway 12-30 is the primary runway, with a length of 7,000 feet and a width of 150 feet. The primary runway does not conform to the current FAA design standards (including nonstandard Runway Safety Areas.) Because of this, the northwest end of Runway 12-30 is marked with a displaced threshold of 715 feet due primarily to the location of an elevated railroad track (landing threshold 715 feet from physical end of runway pavement due to railroad obstruction). This results in a landing length of 6,285 feet for aircraft landing on Runway 12. The FAA design standard deficiencies for Runway 12-30 are discussed further in Chapter 2, Purpose and Need, of this EIS.

The Runway Safety Area (RSA) is an integral part of the airport environment. The RSA dimensions are established in FAA Advisory Circular 150/5300-13, Airport Design, and are intended to provide a measure of safety in the event of an aircraft's leaving the runway by significantly reducing the extent of personal injury and aircraft damage during overruns, undershoots, and veer-offs. FAA Order 5300.1F, Modifications to Agency Airport Design Construction, and Equipment Standards, does not allow a modification [waiver] for RSA standards. Instead, a RSA needing improvement is defined as nonstandard until and unless it is improved to all current standards. FAA's Runway Safety Area Program, which was initiated on October 1, 1999, established the objective that all RSAs at Federally obligated airports and all RSA at airports certificated under 14 Code of Federal Regulation (CFR) Part 139 shall conform to the standards contained in AC 150/ 5300-13, Airport Design, to the extent practicable. Gary/Chicago International Airport is certificated under Part 139. An accompanying goal was to accomplish this compliance by the end of Fiscal Year 2007.

The existing passenger terminal building is located north of Runway 12-30. The existing terminal building is a one-level structure (approximately 16,000 square feet) which houses airline ticket counter (approximately

[3] Fiscal year 2003 FAA funding classification is based on calendar year 2001 enplanements; Airport enplanements were less than 10,000 during calendar years 2002 and 2003 so the airport will not be classified as commercial service primary for a two year period; however, the airport expects to exceed 10,000 enplanements during calendar year 2004 (based on Southeast Airlines activity).

49 linear feet) and related airline office space, a passenger waiting area, a baggage claim area, a concessions area, and a building mechanical area. The building was originally constructed in 1982 and underwent a major renovation in 1999.

Three projections for future passenger enplanements and passenger aircraft departures were developed in the 2001 Airport Master Plan: low or base, mid and high case forecasts. On January 3, 2000, the FAA found the low case forecast to be acceptable and approved that forecast for the purposes of planning airport development at Gary/Chicago International Airport for the next five years.[4] The low case forecast assumed the Gary/Chicago International Airport passenger enplanements would increase during the next two decades (from 2000-2020) at the same or a similar rate as forecast by the FAA for domestic scheduled air carriers in its Aerospace Forecast FY 1999-2010. The low case forecast used an estimated annual base of 48,800 enplanements in 2000 (an estimate of Pan Am and Casino Express activities that were expected during that year). The actual enplanements during calendar year 2000 were 24,588. Enplanements at Gary/Chicago International Airport totaled 21,194 passengers during calendar year 2001; 8,275 passengers during 2002; 1,500 (estimated-not yet available) during 2003; with approximately 35,000 expected during 2004.

On the other hand, the mid case developed for the 2001 Airport Master Plan showed total passenger enplanements for the year 2020 to occur at the level of 825,900 and the total operations of passenger air carrier aircraft were expected to reach 29,388. This is similar to activity levels forecast by the State of Illinois for the proposed South Suburban Airport whose market area overlaps with Gary/Chicago International Airport to a certain extent. However, as explained later in this section, the way FAA's official forecasts are developed for existing airports, the FAA Terminal Area Forecasts (TAF) usually, except for large hubs, takes into account only existing trends, with some accommodation of well-documented future commitments by existing and future airport users. Not accommodated in the FAA's current 2003 TAF for Gary/Chicago International Airport are additional operations recently announced by Southeast Airlines, after the 2003 TAF was published. Both Gary/Chicago International Airport and the proposed South Suburban Airport (if built) could attract passengers from the same service areas as Chicago O'Hare International Airport and Chicago Midway International. However, for Gary/Chicago International Airport the number of passengers attracted from O'Hare and Midway service areas is expected to be minimal and not significant when compared to the amount of passengers currently served by those airports. It is probable that if the South Suburban Airport would be built, that it too would eventually have a TAF that is significantly less than its master plan forecasts if it does not have well-documented future commitments by existing and future airport users.

As part of the EIS preparation process, the assumptions of the low case forecasts were revisited in light of post-2001 realities and in light of the potential new users that continue to meet with representatives from

[4] Federal Aviation Administration, Airport District Office – Pené A. Beversdorf, Assistant Manager; Letter to Nicholas L. Nesta, Project Manager, HNTB Corporation, January 3, 2000.

the airport. The inauguration of air service by Southeast Airline in February of 2004 also fits the profile of service that the 2001 Airport Master Plan forecasts were based upon. This review has found the low case forecast to still be reasonable for airport planning purposes. However, the 2001 Airport Master Plan forecast is greater than 10% more than the TAF for 2003. In the short term, the TAF and 2001 Airport Master Plan forecasts for Gary/Chicago International Airport do not match and are not within 10% of each other as usually expected. However, FAA policy dated May 21, 2002[5] allows greater differences where the forecasts aren't being used to justify a project. Nevertheless, since the FAA's TAF forecasts are reevaluated annually, it is anticipated that in the long term, the future TAF forecasts and the airport's existing 2001 Airport Master Plan forecast will converge as air carrier and air cargo service is established and/or expanded, and efforts to attract corporate general aviation and military aircraft are successful. Neither forecast is being used as justification for the project.

PURPOSE AND NEED FOR THE PROJECT

The following is a summary of the analysis done to examine the needs of existing and future users of the Gary/Chicago International Airport and determine the purpose for Proposed Actions by the Gary/Chicago Airport Authority and the Federal Aviation Administration.

- The existing Runway 12-30 does not meet the FAA's recent national mandate for runway safety areas to comply with the standards outlined in *FAA Advisory Circular 150-5300-13.* The purpose of the Proposed Action is to comply with current safety standards on existing Runway 12-30. There is a need to improve the existing runway to increase the operating margin of safety and comply with FAA standards.

- The current and future users in the area of air carrier and cargo operators need additional runway length to operate efficiently and safely with the appropriate load factors and to the destinations desired. The purpose of the Proposed Action is to provide takeoff and landing capabilities for cost-effective travel by Airport Reference Code C-III aircraft within a 1,500-mile range from the Gary/Chicago International Airport. There is the need to provide additional runway length to meet the requirements of current and future users.

- The existing terminal building and apron at Gary/Chicago International Airport will not meet the demands of the projected airline users at the airport. The purpose of the Proposed Action is to provide a passenger terminal to meet the needs of airline passengers that may be attracted to the Gary/Chicago International Airport based on the low case forecast. There is a need to expand the terminal building and apron sizes to meet the needs of the Gary/Chicago International Airport airline passengers.

[5] Federal Aviation Administration. Memorandum "Review and Approval of Aviation Forecasts." by APP-500. May 31, 2002.

- The need for a new passenger terminal and air cargo facilities is considered possible in the foreseeable future. Major terminal improvement programs require long lead times for implementation; however, once demand exceeds capacity, an immediate response is needed.

  The purpose of the Proposed Action is to select site(s) for a future passenger terminal and/or future cargo facility to serve the users of the Gary/Chicago International Airport in order to reserve these areas for long-term aviation related users. There is a need to acquire/reserve and remediate as necessary site areas designated for future aviation related uses for the Gary/Chicago International Airport. (It is recognized that the purpose and need for the actual development of these more-extensive infrastructure has not been demonstrated at this time and a separate environmental review will be needed at the time the need is demonstrated.)

EIS ALTERNATIVES EVALUATION PROCESS

For the purposes of the alternatives analysis, five different areas of improvement have been identified for analysis. Within these five areas of improvements there are various connected actions that are considered incidental to the Proposed Action; that is, they would not occur without the implementation of the Proposed Action. The five areas for improvement are:

- Improvements to Conform to Current FAA Standards
- Improvements to Provide Additional Runway Length
- Railroad Relocation (considered part of Improvements to Conform to Current FAA Standards but reviewed separately during alternatives analysis process)
- Existing Terminal Facility Expansion
- Acquisition and Reservation of Areas for Passenger Terminal and Cargo Facilities

The FAA has completed a thorough and objective review of reasonable alternatives to Gary/Chicago International Airport's Proposed Action. The FAA has generated alternatives, on its own and through the Master Planning process for the Gary/Chicago International Airport, for evaluation in this EIS. CEQ regulations require that an agency look at "reasonable" alternatives, while *49 U.S.C. 47106(1)(c)(C)* requires, as a condition to granting Federal funds, analysis of "feasible and prudent" alternatives for a Proposed Action when significant impacts would occur.[6] With those standards in mind, the FAA did not evaluate airside or landside alternatives in detail if they did not meet the project purpose and need. The alternatives analysis process has been conducted in three levels as identified below:

[6] Council on Environmental Quality – 40 CFR 28 1502.14.

- **Level 1, Purpose and Need** – A level 1 analysis was performed to determine which alternatives meet the purpose and need criteria as described in Chapter 2, Purpose and Need, of this EIS. Alternatives that did not meet the purpose and need criteria for the project were not considered further in this EIS.

- **Level 2, Constructability and Cost** – The level 2 analysis considered the constructability and relative costs for implementing an alternative. Constructability issues considered factors such as land acquisition, extent of earthwork required, necessity to relocate aviation-related facilities, and impact to ongoing airport operations. Cost was evaluated based on preliminary cost estimates or as compared to other alternatives. Those alternatives that met the second level criteria were retained for evaluation in level 3.

- **Level 3, Environmental Impacts** – The environmental impacts evaluated in level 3 focused on resource categories having measurable impact to threshold criteria defined in *FAA Order 5050.4, Airport Environmental Handbook*. Major known environmental issues in the airport area have been identified and considered, including wetlands, habitat, water resources, and site contamination. Those alternatives that remained after the level 3 evaluation are considered in detail in Chapter 5, Environmental Consequences, of this EIS.

ALTERNATIVES ENVIRONMENTALLY ASSESSED IN THE EIS

Improvements to Conform to Current FAA Standards

Two of the eight alternatives studied are being carried forward for detailed environmental study: no action and improvements to Existing Runway 12-30, as described below.

The No Action alternative would mean no expansion of the airport boundaries either through no changes to the runway or shortening the existing runway to provide FAA standard RSAs. However, this alternative does not meet the purpose and need, but has been retained per CEQ requirements.

Improving Runway 12-30 involves acquiring land northwest of the airport to allow for modification to the RSA and other necessary improvements, extending Runway 12-30 approximately 546 feet to the northwest and using declared distance relocating Runway 30 threshold approximately 546 feet to the northwest resulting in approximately 7,546 feet of runway pavement with 7,000 feet available for landings on Runway 12 and 30 and accelerate stop distance on Runway 12 and approximately 7,546 feet available for all other operations, establishing FAA standard RSAs on both ends of the runway; relocating the necessary navaids to ultimate location shown on the ALP except for the PAPI4-s and REILs on Runway 12, which would be relocated to serve the approximately 546-foot extended runway, and removing/relocating the needed obstructions including the EJ&E Railway, power line and perimeter road. In addition, modifications would be made, as necessary, to the ongoing clean-up activities off the runway end (Conservation Chemical site

and pipeline from MIDCO II) to assure compatibility with the runway improvements. The Gary/Chicago Airport Authority prefers this airside alternative to conform to current FAA standards.

Improvements to Provide Additional Runway Length

Two of the seven alternatives studied are being carried forward for detailed environmental study: no action and extending Runway 12-30 on the north end, as described below.

The No Action alternative would mean no change to provide more than a 7,000-foot runway. However, this alternative does not meet the purpose and need, but has been retained per CEQ requirements.

Improving Runway 12-30 involves the extension of Runway 12-30 to the northwest for a total runway length of 8,900 feet with FAA standard RSAs on both ends of the runway, relocation of the Runway 12 navaids and removing/relocating any obstructions as necessary. The improvements to extend existing Runway 12-30 would occur simultaneously with and/or require the accomplishment of the improvements to conform Runway 12-30 to current FAA standards described earlier in this chapter. The Gary/Chicago Airport Authority prefers this airside alternative to provide additional runway length.

EJ&E Railway Relocation

The no action and railway relocation which loops to the west end of the extended runway (with an interim and final route under study) are being carried forward for detailed environmental study. The railway relocation is reviewed environmentally as one of the projects needed to Conform to Current FAA Standards.

The No Action alternative would mean no changes to the runway but continuing to operate it as a nonstandard facility that does not meet current FAA standards. This alternative does not meet the purpose and need, but has been retained per CEQ requirements.

The refined preferred routing for the relocation of the EJ&E Railway is referred to as Route 1D. In addition, an interim phase for the relocation of the preferred route has been identified, Route 1E. This EIS has examined both the interim phase, Route 1E, and the preferred route, Route 1D, so that the Gary/Chicago Airport Authority may proceed with either route, as funding allows. Under both Route 1D or Route 1E, the area off the northwest end of the existing Runway 12-30 will be cleared of obstructions and will allow for the improvement of the RSA and ROFA in compliance with the FAA design standards. The Gary/Chicago Airport Authority prefers Route 1D with an interim Route 1E proposed as required due to funding availability.

Existing Terminal Facility Expansion

Two of the three alternatives studied are being carried forward for detailed environmental study: no action and expand existing terminal.

In comparing an expansion of the existing terminal building to the investment in a new terminal building, the cost and time requirements for acquiring and developing a new terminal facility influence greatly the decision regarding the timing for relocation. In this case, where the existing terminal site has the ability to accommodate the forecast growth for the low-case activity level, it makes more sense to invest in an expansion of the existing terminal building and to continue to make use of the facility that exists until such time as the demand clearly dictates a move to a new site. This is particularly true given the fact that there are no known environmental impediments to an expansion of the existing terminal facility. Accordingly, the immediate development of a new terminal facility has been eliminated from further consideration at this time; although the selection of and reservation of a site for the longer-term future is considered under the next section of this alternatives analysis. The alternatives for no action and expansion of the existing terminal building are recommended for further more detailed evaluation under this EIS. The expansion of the existing terminal is the preferred alternative of the Gary/Chicago Airport Authority.

Acquisition/Reservation of Land for Long-term Development Options

Two of the five alternatives studied are being carried forward for detailed environmental study: no action and plan for new terminal area northwest/new cargo facility southwest of the new end of Runway 12.

The no action alternative and new terminal area northwest/new cargo facility southwest alternative were reviewed under level 3. In both cases there are no significant environmental issues that preclude further detailed study during the EIS. The Gary/Chicago Airport Authority preferred alternative is to actively reserve the areas identified for the potential long-term development shown on the 2001 Airport Layout Plan by proceeding with the assembly of this area and identifying any environmental issues of concern.

AFFECTED ENVIRONMENT

The study area consists of a variety of land uses, such as residential, community services, industrial, manufacturing, commercial, and transportation facilities. A majority of the study area is zoned industrial/manufacturing with two notable areas zoned residential. Additionally, there are a few commercial corridors and an area zoned for commercial activities.

The area west of the airport includes a vacant area just north of I-90, an undeveloped area and industrial use north of the vacant area, and utility and industrial uses further north. The area to the north and east of the airport along Industrial Highway and north of I-90 includes industrial/manufacturing uses, land that is owned by the airport but presently unused, and a small vacant area.

The communities of the Gary PMSA have undergone many of the economic changes that have affected other urban cities, including community disinvestment, changes in the mix of manufacturing due to technological improvements and foreign competition, and the growth of suburban development. As the nation's economy began to shift from a manufacturing-based economy to a service economy, tolerance

lessened for industries that expelled dust, chemicals, and other pollutants. Industries encountered new challenges, including an aging public and private infrastructure, buildings, and outdated technology that could not keep up with production needs. With the current introduction of casinos and other initiatives in the recreational and entertainment industry, Gary is undergoing a transition to a more service-based economy. At the same time, the Gary PMSA is increasingly serving as a residential community for former Chicago residents.

The Nature Conservancy found the greatest concentration of unique areas in the Great Lakes Basin in the Northwest Indiana area, the same area that the Region 5 office of the U.S. EPA found to be the most degraded in a six-state region that included Ohio, Michigan, Wisconsin, Minnesota, and Illinois[7].

One publicly protected and managed natural area lies within the study boundary: land within the midfield triangle of the Gary/Chicago International Airport. Other areas of environmental interest are located within the study area. These areas, which are not publicly owned or not managed, include the City of Gary's Brunswick Center Savanna[8], privately-owned Buffington Sand Prairie; both the East and West portions of The Nature Conservancy's Ivanhoe system, Clark and Pine Dune and Swale, Clark Junction South, Clark Junction Addition #1, and the South Shore Right of Way. Several natural areas also exist in the vicinity of the study area.[9]

Within the study boundary are two former dune and swale sites with extensive physical disturbance resulting in most of the natural topography being destroyed. These areas are the Asphalt Wetlands and the Vulcan site.

A 1999 collaboration of The Nature Conservancy and Ball State University[10] resulted in a document containing information on these areas of environmental interest. In this study, information has been compiled from a number of sources including habitat communities represented on the sites, protection/management status, and assigned grades for conditions of these habitats with respect to disturbance.

The individual tracts were classified into four categories – *Core Biodiversity Sites, Supplemental Biodiversity Sites, Supplemental Habitat,* and *Vacant Urban Land*. The categories are based on size,

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[7] Botts, Lee. 1998. Nature's Metropolis and Indiana. *Chicago Wilderness Magazine.* Internet Website. <www.chicagowildernessmag.org/issues/winter1998/nature.html>.

[8] Restoration of approximately 13.5 acres of Brunswick Savannah is planned as a part of the mitigation for the Boeing Corporate Hangar construction. Restoration and protection of this area could begin in 2004 or 2005.

[9] The Nature Conservancy and Ball State University. *Biodiversity Conservation Opportunities in the Toleston Strandplain of Northern Lake County, Indiana: A Strategic Plan for Conservation Success.* 1999.

[10] The Nature Conservancy and Ball State University. *Biodiversity Conservation Opportunities in the Toleston Strandplain of Northern Lake County, Indiana: A Strategic Plan for Conservation Success.* 1999.

habitat quality, and the extent of physical disturbance. These assessments are an attempt to characterize the habitat value of individual sites, the borders of which are established by the surrounding land use.[11]

There are two sites in the study area that are currently undergoing cleanup activity. These areas include the Conservation Chemical Company Site and the Midco II Site. In addition, the Ninth Avenue Site and the Midco I Site cleanup are within close proximity of the airport.

The Conservation Chemical Company Site is inline with the potential extension of Runway 12-30 with about half of the site actually to be paved under the proposed runway extension. Conservation Chemical Company recycled various chemicals and left many hazardous materials/conditions when operations ceased. A coalition of "potentially responsible parties (PRPs) removed all chemicals, tanks, buildings, and contaminated soils and installed a clay cap." Lastly, the PRPs completed the installation of an interceptor gallery to prevent any potential offsite migration of contaminated groundwater. These actions began in July 1999 and were completed by December 2001. Ownership of the site has been transferred to the Gary/Chicago Airport Authority. There remains on the site a pool of approximately 250,000 gallons of liquid hydrocarbon free product above the water table. In late 2002, U.S. EPA Region 5 installed five extraction wells to remove this free product. After U.S. EPA Region 5 completes the removal of this free product, further remedial actions, if necessary will be undertaken to meet the acceptable levels of contaminants established in current regulations.[12] As a part of the airport's Proposed Action, the extraction wells would be modified so that they are inset and covered to maintain the compatibility of this ongoing clean-up operation with the operation of an extended or improved runway.

The Midco II superfund site operated for only seven months during 1977 storing waste solvents and other wastes in tank and drums, neutralized acids and caustics, and stored reclaimable materials. A fire in August 1977 destroyed the site including 50,000 to 60,000 drums. In 1981 U.S. EPA fenced the site and removed/cleaned the site surface during the six-year period from 1984-1989. Interaction with the PRPs began in 1985 but on site remediation actions did not begin until 1992. Groundwater extraction, treatment and deep well injection began in February 1996 and in currently ongoing. The cleanup of the groundwater is done in conjunction with Midco I where the injection well is located. This joint aspect of the remediation plan required the construction of an underground pipeline joining the two sites. This pipeline parallels the EJ&E Railway line that will be relocated. Since U.S. EPA expects this remediation program to last thirty years, the present location of this pipeline should be evaluated to see if it may interfere with the runway

[11] The Nature Conservancy and Ball State University. *Biodiversity Conservation Opportunities in the Toleston Strandplain of Northern Lake County, Indiana: A Strategic Plan for Conservation Success.* 1999.

[12] U.S. Environmental Protection Agency, Region 5. Interoffice Memo. *Reports of Significant Developments and Activities Ending on January 11, 2002*. January 18, 2002. Internet Web Site http:/www.epa.gov/reg5sfum/sfd/significant-actions/acrobat/2002/020111.pdf.

extension, which it transects.[13] As a part of the Proposed Action, the pipeline may be encased to assure its compatibility with the construction activities and its crossing under the runway or taxiway areas.

Western Scrap Corporation occupies the corner of Chicago and Industrial Avenues and is included in the land acquisition area for the runway expansion. Limited observations during the Phase I Environmental Site Assessment investigation were made from the public roadways and the EJ&E Railway trackage. Piles of tires, auto parts and car bodies, a few tank trailers and above ground tanks and piles of scrap metal were observed. Tank contents, if any, or hazardous materials could not be ascertained from the limited and distant viewing distance. However, the site has had a history of environmental issues. Inspections in 1985 led to a cleanup that ended in 1989. More recently, U.S. EPA issued and enforcement order in March 1999 and IDEM issued an air pollution Notice of Violation based on a January, 2001 inspection.[14]

SUMMARY OF IMPACTS

The Environmental Consequences chapter summarizes the potential impacts on the social, cultural, physical and natural environment that would result from the Proposed Action. A baseline year, 2000, has been examined and compared to future year scenarios, 2007, with no action or reasonable alternatives for conducting the Proposed Action, as identified in the Alternatives Analysis.

Noise/Land Use/Direct and Indirect Socioeconomic

The number of residences within the 65 DNL contour would decrease with the Proposed Actions: both the 546-foot extension to conform to FAA requirements and the extension of the runway by an additional 1,354 feet have a net effect of fewer residences within the 65 DNL contour than existed in the 2000 base year or are projected under the 2007 no action scenario.

The project's potential to create adverse impacts on low-income and minority populations was compared to those impacts likely to be experienced by the general population. This permits a determination of whether such impacts disproportionately burden low-income and minority groups. This analysis found that while the Proposed Action disproportionately affects communities of low-income and minority populations, in general these impacts are not significantly adverse and do not severely burden low-income and minority populations.

Finally, it should be noted that the communities of Gary and East Chicago have experienced dramatic economic changes that have occurred in other urban cities, such as community disinvestment, changes in

[13] NPL Factsheets for Indiana: Midco II; Record of Decision System (RODS): Midco II; Telephone Conversation between Richard E. Boice, USEPA Region 5 and Thomas Blaszak, CWE on March 6, 2003.

[14] Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Phase I Report of Area Northwest of Gary/Chicago Airport; CERCLIS Hazardous Waste Sites: Western Scrap Corp.; IDEM Office of Enforcement Monthly Actions and Orders: Western Scrap Corp.*

the mix of manufacturing due to technological improvements and foreign competition, and the growth of suburban development. This has resulted in relatively high poverty rates, unemployment and low incomes. The expansion of the Gary/Chicago International Airport can be anticipated to create new business opportunities and markets in the area. A larger work force will be employed at the airport as a result of its expansion, which will create new jobs for local residents. This growth in employment will help increase incomes and raise the overall quality of life for minority and low-income groups.

Air Quality

Although the proposed additional length to Runway 12-30 may permit aircraft to carry more fuel and baggage, thereby allowing the aircraft to utilize a heavier takeoff weight, no means of projecting the number of affected flights is available. Therefore, no information on flight stage length was including in the modeling. However, the overall contribution to regional emissions from a small number of flights carrying more fuel would not significantly increase the projected emissions.

By comparing the predicted emissions under both future improvement and no-action scenarios, the impacts of the proposed project are insignificant. The estimated emissions increases for CO, VOC, NO_2, SO_2, and PM_{10} will only be 0.6, 0.1, 5.1, 0.0, and 0.2 tons/year, respectively; and are all far below (within) the General Conformity Thresholds (25 ~ 100 tons/year).

Construction emissions were estimated based upon a "worst-case" 3-year construction schedule. The annual emissions resulting from construction equipment and vehicles during year 2005, 2006, and 2007 are below (within) the conformity emission thresholds. Therefore, the Gary/Chicago International Airport construction activities will conform to the General Conformity Rules and CAAA requirements. In addition, the on-site construction management and policy can further reduce these emissions. It should be noted that construction and operational increases have not been combined, since operational emission is a sequential result of construction completion. The operational emission increases are most likely to start in 2008 after the railroad relocation and runway extension projects are completed in 2007.

The air quality emission and impact evaluation results are consistent with the impact findings through airport operation, proposed construction, and traffic evaluation, and purpose of the proposed project. To ensure the compliance with Ambient Air Quality Standards and SIP requirements, the proposed project:

- will not cause or contribute to any new violation of the standard;
- will not increase the frequency or severity of any existing violation; and
- will not delay timely attainment of the standards.

Therefore, the project will have an insignificant impact on air quality and will comply with the rules and the requirements of the Clean Air Act.

Water Quality

The Proposed Action has the potential of improving water quality in the immediate area of the airport because of the remediation of contaminated soil and groundwater in the area northwest of the runway.

The proposed project does not involve any work within the Grand Calumet River. The impervious area of the airport is expected to increase, but because the soils in the study area are sandy and will allow percolation, stormwater runoff is not expected to increase significantly. Since minimal flow increases are anticipated, no detention will be provided and the size of the existing discharge pipes or ditches would not be altered. Therefore, the existing culverts would serve to restrict flows to the river. Best Management Practices and engineering controls will be implemented to mitigate anticipated erosion and sedimentation impacts throughout construction, as well as post-construction during the operation of the proposed improvements. Measures may include the use of silt fencing, sediment berms, interceptor ditches, hay bales, riprap dams, sedimentation basins, and other erosion and sediment control structures.

Aircraft, vehicle maintenance, and fueling facilities, where petroleum-based products are in use, would continue to minimize the potential for petroleum product discharge into storm water. The airport would continue to use oil/water separators in all fueling areas as a Best Management Practice (BMP). The airport-wide SPCC and SWPPP would be updated to include the new facilities and appropriate activities.

The increase in runway and taxiway pavement is likely to increase pavement deicing and anti-icing activities. The airport would use acetates and formates as their primary pavement deicer, using urea only in emergency situations. Aircraft deicing/anti-icing runoff would continue to be directed to the public wastewater treatment plant. Thus, the application of deicing chemicals should not impact water quality. The airport-wide SPCC and SWPPP would be updated to include the new facilities and appropriate activities.

Most of the construction activities would occur northwest of Runway 12-30 in the contaminated Asphalt Wetland. The degraded swales and ponds within the construction area would be eliminated by the proposed activities.

The construction activities in the contaminated Asphalt Wetland would remediate contaminated groundwater and soil to reduce or eliminate the risk of groundwater contaminants (primarily metals and organic compounds) and to prevent further migration of contaminated groundwater.[15] The remediation would reduce or eliminate the discharge of contaminated groundwater to the Grand Calumet River. The remaining thick black tank bottoms and abandoned drums would be removed and disposed in an environmentally sensitive manner. Surficial soils would be removed and replaced with clean fill. The

[15] Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Conceptual Remediation Plan NBD Bank Trust Property Located within the Runway Extension Zone Northwest of Gary/Chicago Airpor*t, Gary, Indiana, November 2003.

proposed placement of a slurry wall upgradient of the contaminated zone and installation of extraction wells at the southern boundary of the property (near Gary Avenue) to pump and treat the groundwater should prevent migration of contaminated groundwater. Treated groundwater would be re-injected and/or combined with treated groundwater at the ongoing groundwater remediation efforts at the Conservation Chemical Site and the MIDCO II site.

Section 303c Properties / Historic, Architectural, Archaeological, and Cultural Resources

The proposed alternative will impact two areas of environmental interest within the study area. These areas are not Section 303(c) lands.

There will be significant impacts to the Asphalt Wetland for the proposed alternative. The impacts will be due to the extension of Runway 12-30, the relocation of the EJ&E Railway, the creation of a 500-foot runway safety area (RSA) along the runway to conform to Federal safety standards, and the development of an access road. These activities will eliminate nearly all the remnant dune and swale habitat remaining in the degraded Asphalt Wetlands.

There will also be impacts to Clark Junction South due to the relocation of the EJ&E Railway. The approximately 300-foot long railroad crossing of Clark Junction South would require placing fill in this disturbed wetland.

The conclusions of the *Archaeological Records Review*, conducted by Archaeological Resources Management Service, are that the project be allowed to proceed without additional archaeological assessment.[16] In their February 13, 2004 letter, the Indiana State Historic Preservation Officer (SHPO) identified that the "staff of the SHPO has conducted an analysis of the materials dated January 15, 2004 and received on January 23, 2004 for the improvement of the Gary/Chicago International Airport including railroad relocation, improved passenger terminal and air cargo areas. Based upon the documentation available to the staff of the Indiana SHPO and the results of the archaeological records review, we have not identified any historic buildings, structures, districts, objects, or archaeological resources listed in or eligible for inclusion in the National Register of Historic Places within the probable area of potential effects. This identification is subject to the following condition –the project activities remain within areas disturbed by previous construction." The SHPO has requested that the FAA analyze the information that has been gathered and make the necessary determination and finding. After the FAA makes the necessary determinations and findings it needs to be forward to the Indiana SHPO.

[16] Archaeological Resources Management Service, *Archaeological Records Review, Gary/Chicago Airport, Lake County, Indiana*, November 19, 2003.

Biotic Communities/Threatened and Endangered Species

The biotic communities of areas where proposed impacts would occur under the project alternatives have been characterized through wetland delineations and biological surveys conducted for this and other projects, and supplemented by communications with environmental regulatory agencies and a literature review.

Extension of Runway 12-30 and Taxiway A by 546 feet to the northwest to conform to current FAA standards would result in the filling, grading and paving of much of the central portion of the degraded Asphalt Wetlands, which contain some remnant dune and swale habitat. While Runway 12 and Taxiway A would only extend approximately 200 feet into the Asphalt Wetlands, improvements to the Runway 12 runway safety area (RSA), including the airside perimeter road and southwest access roads, would require filling and grading of a 500-foot by 1000-foot area at the end of Runway 12. To accommodate these improvements, nearly half of the remnant dune and swale habitat remaining in the Asphalt Wetlands would be permanently lost. A variety of vegetative and wildlife habitat types, including wetland plant communities, would also be lost.

The relocated EJ&E tracks under interim Route 1E and final Route 1D would follow the same route until reaching Cline Avenue. This route would pass through the triangular Wetland B, comprised of Common Reed marshes and patches of successional forest, for about 700 feet. Approximately 5 feet of fill would be required along the route through this area in order to meet the elevation of the existing EJ&E tracks. The relocated rail route through the Asphalt Wetlands, requiring about 3 feet of fill to accommodate the EJ&E tracks, would impact native and exotic woody vegetation over remnants of dune and swale topography, and a wetland that has been severely disturbed by a former oil refinery. Route 1E would curve around the end of Runway 12-30 and turn to the southeast, parallel to the runway and pass through the Asphalt wetlands again before rejoining the original EJ&E tracks. The final Route 1D would continue north along Cline Avenue, then turn east parallel to the CSX Barr Subdivision tracks and cross through Clark Junction South. The approximately 300-foot-long railroad crossing of Clark Junction South under Route 1D would require placing fill in this disturbed wetland. While this area is already disturbed and contains dense cover of exotic species, natural swale topography may exist at the site. These activities would result in a permanent loss of vegetation and associated wildlife habitat.

Filling, grading and paving in association with extending Runway 12-30 and Taxiway A an additional 1,354 feet to the northwest would eliminate nearly all the remnant dune and swale habitat remaining in the degraded Asphalt Wetlands. While the 1,354-foot runway and taxiway extensions would only reach halfway across the Asphalt Wetlands, the 500-foot by 1,000-foot RSA and airside perimeter road and southwest access roads would extend to Cline Ave, completely bisecting the Asphalt Wetlands with fill. This proposed project would eliminate most of the wetlands, vegetational communities, and associated habitat in the Asphalt Wetlands.

The locations of special status species in areas where proposed impacts would occur under the project alternatives have been described in detail in biological surveys for this and other projects and through communications with USFWS and IDNR staff.

The relocation of the EJ&E Railway track under Route 1D, with the exception of Wetland B, the Asphalt Wetlands and Clark Junction South, is alongside existing railroad tracks and roadsides and is not expected to disturb any state or Federally listed species of special concern. No listed species were observed within Wetland B. The relocation of the railroad track through the Asphalt Wetlands has the potential to permanently impact one state-endangered and one state-rare plant species (sticky goldenrod, Baltic rush and Prairie goldenrod). Sticky goldenrod, Solidago simplex var gillmanii, is a state-endangered species and has been identified in Wetland 1-A1. Prairie goldenrod, Solidago ptarmicoides, is a state-rare species and has been identified in Wetland 1-A1 and Wetland 1-A2. The relocation of the EJ&E railroad through Clack Junction South has the potential to permanently impact one state-endangered plant species (Bicknell Northern Crane's Bill) and one state herpetofauna species of concern (Northern cricket frog).

Under Route 1E, impacts to special status species from the relocation of the EJ&E Railway track would be limited to the Asphalt Wetlands, which would be crossed twice by the track. As mentioned above, the relocation of the railroad track through the Asphalt Wetlands has the potential to permanently impact one state-endangered and one state-rare plant species (sticky goldenrod, Baltic rush and Prairie goldenrod).

The FAA recommends that the Runway 30 runway protection zone be under the control of the airport. As a result, approximately 20 acres of land southeast of the airport would have to be acquired. This area includes several acres of land adjacent to the Grand Calumet River, and several acres east of Industrial Highway. Other than the removal of residences and business, no other construction activities are proposed within this area; as such, no disturbance to state or Federally listed species of special concern is expected.

These proposed Improvements will not disturb the Federally endangered Karner blue butterfly, as the proposed areas of impacts are located in habitat that does not support wild lupine. While the USFWS has reported the presence of wild lupine in the midfield triangle area, the Karner blue butterfly has not been observed there. As no construction is proposed in this area, the project is not expected to impact the Karner blue butterfly or its potential habitat.

Wetlands and Streams

Wetlands were identified that will be impacted by the Proposed Action; approximately 49.03 acres of wetlands were delineated and an additional 14 acres of potential wetlands were identified from aerial photography on property where access has not been granted.

EXHIBIT ES-2 Summary of Wetland Area Identified Wetland Delineation October 2002 Gary/Chicago International Airport		
Section	**Acreage of Wetlands**	**Habitat Type**
1	7.93 acres	Emergent and scrub shrub
2	0.67 acre	Emergent and scrub shrub
3	49.03 acres	Emergent and scrub shrub
From Aerials	14 acres (approximate)	Emergent and scrub shrub
Total	**63.03**	
Source: J.F. New & Associates, Inc., 2002.		

The Corps of Engineers has authority over the discharge of fill or dredged material into "waters of the United States." This includes authority over any filling, mechanical land clearing, or construction activities that occur within the boundaries of any "water of the United States." A permit must be obtained from the Corps of Engineers before any of these activities occur. In addition, the Indiana Department of Environmental Management (IDEM) is responsible for issuing Clean Water Act Section 401 permits known as Water Quality Certification (WQC) in conjunction with Corps 404 permits. The findings of the 2002 delineation report have been submitted to the Corps of Engineers for verification. The Corps and IDEM will likely require permit approval for any construction activity proposed to occur within wetlands. A preliminary mitigation plan has been identified below in regard to the disturbance of these wetlands. Preparation of wetland permit application materials and submittals to the Corps and IDEM could carried out concurrently with the preparation of this EIS.

Floodplains

Only one small portion of the 100-year floodplain (Zone A2) is shown within a construction area northwest of Runway 12. However, upon visual inspection, it was determined that this area has been culverted and should no longer be considered as a floodplain area. The remainder of the 100-year floodplains and all of the 500-year floodplains (Zone B) are located to the south of the airport runways. Construction would primarily occur in the areas north and northwest of Runway 12. Thus, these improvements appear to avoid impacts to floodplains and Special Flood Hazard Areas in accordance with FAA Order 5050.4.

The floodplains located in the area of the southeast RPZ will improve if the land is acquired and the buildings are razed. The open space will promote vegetation, which will decrease the amount of impervious areas, thereby providing additional areas that will absorb stormwater runoff.

Coastal Zone Management

In April of 2002, Indiana submitted its Lake Michigan Coastal Program (LMCP) to the Office of Ocean and Coastal Resource Management of the National Oceanic and Atmospheric Administration (NOAA) for approval pursuant to section 306 of the CZM Act. The proposed boundary, established based on public

participation, encompasses the majority of the area that drains into Indiana's portion of Lake Michigan through its rivers, streams, ditches, wetlands, lakes and groundwater[17]. Gary/Chicago International Airport is within the proposed coastal program boundary. NOAA approved the LMCP on August 5, 2002[18].

The Gary/Chicago International Airport Based upon the cross-referencing of the summary matrices included in the *Indiana Lake Michigan Coastal Program and Final Environmental Impact Statement*, all existing regulations guiding the Indiana LMCP have been reviewed and will be followed when implementing the Proposed Action. This report will be submitted for review and concurrence to the Indiana Department of Natural Resources, Coastal Zone office.

Other: Wild and Scenic Rivers, Farmland, Energy Supply and Natural Resources, Light Emissions, Solid Waste

No waterways in the Gary/Chicago International Airport study area or surrounding properties are protected as Wild and Scenic Rivers System[19].

Although the proposed action may have an impact on soils, it will be due to clean-up activities where soils may be removed due to hazardous materials, not impacts caused by converting undeveloped land to developed land. None of the soils located within the study area or the lands where the proposed action is to occur are considered or designated as prime or unique farmland as defined in the FPPA of 1981.[20]

The increased requirements for electrical power associated with the Proposed Action are minimal and are capable of being met by the local energy reserves. The increases in air traffic will increase local demand for aviation fuels; however, airport development will not directly affect the fuel consumption for ground transportation. Although additional energy and natural resources will be required for the operation of the Proposed Action, this will not impact the supply of energy or natural resources to the surrounding communities.

All airfield and terminal lighting improvements will occur within the existing airport property boundary or within the area to be acquired as a part of the Proposed Action. The airfield lighting improvements will shift the light sources approximately 546 feet farther from any light sensitive land uses located southeast of the existing runway. To the northwest, the runway extension will shift airport light sources approximately 1,900 feet closer to light sensitive development; however, residential development is located beyond the major

[17] National Oceanic and Atmospheric Administration (NOAA) and Indiana Department of Natural Resources. *Combined Coastal Program Document and Final Environmental Impact Statement for the State of Indiana*. April 2002. Internet Web Site. <http://www.state.in.us/dnr/lakemich/pdf/lmcp-feis.pdf>.

[18] Rounds, Laurie. 2002. IDNR Lake Michigan Coastal Program Coordinator, personal communication. August 27, 2002.

[19] Gary/Chicago Airport Authority, prepared by HNTB Corporation. Gary/Chicago Airport Master Plan Update. November 2001.

[20] United States Department of Agriculture, letter dated August 19, 2003.

roadway serving the area (Cline Avenue), which would continue to serve as a buffer from airport light emissions and is further from the airport than residential development to the southeast. No significant off-airport light emission impacts are anticipated. Any on and off-airport light impacts from the terminal or roadway lighting on pilots or airport traffic control tower personnel should be able to be addressed during the design of the runway extension and terminal expansion through use of shielding, lowering and/or redirecting the light source, without affecting its utility for the terminal or roadway.

The Proposed Action is not expected to change the solid waste removal practices. A contractor will continue to remove the solid waste from the airport, with a modest increase expected due to the increased terminal facilities and passengers using those facilities. The Proposed Action will require the removal of solid waste and debris generated during the construction process. Because of known contamination sites within the study area, special provisions will be included in the construction document to address the potential for encountering hazardous materials. All applicable Federal, state and local regulations will be followed for the handling cleanup and disposal of hazardous waste during construction activities.

Hazardous Waste

For the properties located in the southeast portion, Phase I ESA did not reveal any RECs in connection with the residences to be acquired due to their proximity to the Runway Protection Zone for Runway 30. Asbestos-containing materials (ACMs) and lead-based paint (LBP) could be present based on the age of the homes. These should be considered during residential demolitions. Also, several 55-gallon drums and an AST were observed at the equipment storage facility, NG Land Ltd., which could be a potential REC.[21]

The Phase I ESA revealed recognized environmental conditions (RECs) in the northwest acquisition area in connection with the following properties:

- OSI Environmental (former Solar Environmental, Inc.), 6980 Chicago Avenue (bulk used oil handling facility): The presence of a used oil above-ground storage tank (AST) and stains around the risers could be a potential REC. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.[22]

- 6917 West Industrial Highway (abandoned property): The presence of a fuel dispenser and 55-gallon drums with unknown contents are an indication of possible RECs. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.[23]

[21] Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Draft Phase I Environmental Site Assessment of Properties Located within the Runway Protection Zone Southeast of Gary/Chicago Airport*, Gary, Indiana. October 2002.
[22] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[23] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

- PI&I Motor Express (Kerola Enterprises, Inc.), 7000 Chicago Avenue, (trucking terminal and maintenance facility): Operations including degreasing fueling, rust removal, auto bodywork, paint removal, installation of lead-acid batteries, and oil and fluid replacement may indicate the presence of hazardous materials or waste. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.[24]

- Riechmann Enterprises, Inc., 7200 Chicago Avenue (truck dispatching facility): According to the Indiana Department of Environmental Management (IDEM), a leaking underground storage tank (LUST) incident is still active.[25]

- PGT Trucking, 7212 Chicago Avenue (trucking terminal and maintenance facility): Stains and spills observed around 55-gallon drums containing used oil and mineral spirits may indicate a potential REC. Further, there is a oil/water separator on the site, the condition of which is unknown. Further investigation is required to determine the subsurface condition of the property.[26]

- Truck City of Gary, Inc./Gary White Sales and Service, Inc., 7360 Chicago Avenue (trucking terminal, auto body shop, painting, tractor servicing and maintenance facility): Facility operations including degreasing, rust removal, auto body work, paint preparation, spray booth operations, paint removal, installation of lead-acid batteries, oil and fluid replacement may indicate the presence of hazardous materials or waste. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.[27]

- Fuelex, Inc. (Calumet Flexicore Corp.), 7780 Chicago Avenue (industrial warehouse): Storage of heavy construction equipment and vehicles could be a potential REC if the equipment and vehicles are not properly maintained and result in leakage of automotive fluids. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.[28]

- Western Scrap Corporation, 6901 Chicago Avenue (active auto salvage yard): Dismantling and crushing of vehicles; drainage and transferring vehicle fluids; vehicles and equipment maintenance; parts cleaning (solvent and water); and storage of fluids, used parts, solid wastes, scrap parts, and wrecked vehicles are activities which indicate the presence of hazardous materials and/or wastes. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.[29]

[24] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[25] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[26] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[27] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[28] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[29] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

- LWD Land Company, 6901 Chicago Avenue (office building): Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.[30]

- SES Construction and Industrial Equipment, 6915 Chicago Avenue (construction equipment rental and storage facility): Vehicle maintenance and equipment repair (degreasing, equipment cleaning, rust removal, painting, paint removal, spray booth operation, and brush cleaning) may indicate the presence of hazardous materials or wastes. Due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.[31]

- Beemsterboer Slag Ballast Company, 7501 Chicago Avenue (former slag crushing plant): The presence of an UST on the ground surface is a possible REC. Further investigation is required to determine the subsurface condition of this property.[32]

- Amerigas Propane LP, 7545 Chicago Avenue former propane gas storage and dispensing facility): The presence of spills and stains around the propane ASTs may be an indication of an REC. The presence of oil pipeline remnants used by City Services Oil Company may also be a potential REC. Further investigation is required to determine the subsurface condition of this property.[33]

- Northwest Indiana Water Department, 7405 Chicago Avenue (water pumping station).

- Connell Ltd, 7001 Chicago Avenue (former Luria Brothers and Company Inc), 6633 Industrial Highway, (mill scale de-oiling facility): IDEM files indicate that the facility has completed closure activities. However, IDEM has not completed their review enabling them to issue a No Further Action (NFA) letter. In addition, due to limited off-site field observation, it cannot be conclusively stated that hazardous waste or materials are not present on the property.[34]

- Go-Tane Service Stations, Inc. – 6415 Industrial Highway: Underground storage tanks (USTs) were removed from property in 1989. It is unknown if the USTs were leaking. However, no NFA letter was found in the records. Therefore, further investigation is required to determine the subsurface condition of this property.[35]

- Conservation Chemical Company, 6500 Industrial Highway (abandoned chemical recycling facility (currently owned by the airport): cleanup in process.

[30] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[31] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[32] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[33] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[34] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[35] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.

- EJ&E Railway right-of-way between Industrial Highway and Gary Avenue: This ESA did not reveal any RECs on the property; however, surface soil sampling is recommended due to the past and current usage of the railroad right-of-way.[36]

- NBD Bank Trust Property, 7201 Chicago Avenue and 5510 and 4900 Morse Streets (122-acre vacant land east of Cline Avenue and north of Gary Avenue): Dumped oil sludge/tank bottoms and drums on the property are RECs. Further investigation is required to determine the subsurface condition of this property.[37]

Phase II ESAs should be conducted on each of these properties. In order to conduct the Phase II investigation, site access is required. Of the parcels initially impacted by the Proposed Action, site access was only granted to the NBD Bank Trust Property, located at 7201 Chicago Avenue and 5510 and 4900 Morse Streets (a 122-acre vacant land east of Cline Avenue and north of Gary Avenue).[38]

Subsequently, a Phase II and Phase III ESA has been conducted at the NBD Bank Trust Property. The following summarizes the findings:

Soil Conditions

- Site surface soil is contaminated at the area of suspect tank bottoms, and at the southwest corner of the site (SB-9 and SB-10). The extent of subsurface soil contamination has been limited to the southwest portion (SB-9 and SB-10) of the NBD Bank Trust Property.

- The benzene concentrations for subsurface samples SB-9-SS and SB-10-SS exceeded the RISC migration to groundwater closure levels for industrial land use. Other VOCs in subsurface soil samples detected above the reporting limits were below the IDEM RISC industrial closure levels.

- The PNAs benzo(a)pyrene in surface soil sample SB-9-S, and benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, dibenz(a,h)anthracene, and indeno(1,2,3cd)pyrene in surface soil sample SB-10-S were detected above the IDEM RISC industrial direct contact level.

- Chrysene in subsurface soil sample SB-10-SS was detected above the IDEM RISC groundwater closure levels for industrial land use. Other PNA compounds in surface and

[36] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[37] Clean World Engineering, *Draft Phase I Environmental Site Assessment*, November 2002.
[38] Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Draft Phase I Environmental Site Assessment of Properties Located within the Runway Extension Zone Northwest of Gary/Chicago Airport, Gary, Indiana*. November 2002.

subsurface soil samples detected above the reporting limits were below the IDEM RISC industrial closure levels.

- The RCRA metal lead in subsurface soil ample SB-9-SS and SB-10-SS; and arsenic in subsurface soil samples SB-17-SS and SB-19-SS were detected above the IDEM RISC industrial migration to groundwater level. Other RCRA metals in subsurface soil samples detected above the reporting limits were below the IDEM RISC industrial closure levels.

- Spatial distribution of concentrations for RCRA metals did not define a meaningful plume. Due to the highly permeable nature of the sandy and shallow groundwater table, the contaminants suspected from former usage of the site may have likely migrated into the saturated zone. As the NBD Bank Trust Property is not surrounded by a fence or otherwise secured, the potential for human exposure to contaminants from surface and subsurface soil exists.

- For the eight surface soil samples (SB-9-S through SB-16-S) analyzed, the VOC concentrations detected above the laboratory-reporting limits were below the IDEM RISC industrial–direct contact level.

- The site geology based on the boring logs consists of vegetative growth that overlies approximately six feet of fine to medium sand.

Groundwater Conditions

- Groundwater beneath the NBD Bank Trust Property has possibly been impacted from both on and off-site sources. Groundwater is contaminated in the southwest portion of the NBD Bank Trust Property (SB-9, SB-10, and SB-11). The extent of groundwater contamination has been limited to the southwest portion of the NBD Bank Trust Property, as shown on **Exhibit 5.19-4**.

- The VOC benzene in groundwater sample SB-9-W was detected above the IDEM RISC groundwater closure level for residential and industrial land use. VOC benzene in groundwater sample SB-10-W was detected above the IDEM RISC groundwater closure level for residential land use. Other VOCs in groundwater samples detected above the laboratory-reporting limits were all below the IDEM RISC groundwater closure level for residential land use.

- The PNAs indeno(1,2,3cd)pyrene in groundwater sample SB-9-W; benzo(a)anthracene in groundwater samples SB-10-W and SB-11-W; and benzo(a)pyrene in ground sample SB-10-W were detected above the IDEM RISC closure levels for residential and industrial land use. The PNA benzo(k)fluoranthene in groundwater sample SB-9-W was detected above the IDEM RISC closure level for residential land use. Other PNAs in groundwater

samples detected above the laboratory-reporting limits were all below the IDEM RISC groundwater closure level for residential land use.

- The RCRA metals arsenic in groundwater samples SB-9-W through SB-11-W, SB-13-W, SB-14-W, SB-17-W, SB-21-W, SB-22-W and SB-24-W; and lead in groundwater samples SB-9-W, SB-10-W and SB-13-W were detected above IDEM RISC closure levels for residential and industrial land use. Other RCRA metals in groundwater samples detected above the laboratory-reporting limits were all below the IDEM RISC groundwater closure level for residential land use.

  Spatial distribution of concentrations for RCRA metals did not define a meaningful plume. The presence of contaminants at the southwest boundary groundwater samples (SB-9 and SB-10) and groundwater flow in a southwest direction towards the Grand Calumet River indicates possible off-site migration of contaminants. As the perennial body of water, the Grand Calumet River is considered to have direct contact with the NBD Bank Trust Property; therefore, the surface water pathway is complete. There is no residential housing between the NBD Bank Trust Property and the Grand Calumet River. The surfacial aquifer is not used as a source of drinking water by the residents. However, there is no groundwater restriction by the City of Gary prohibiting the use of groundwater as a source of drinking water.[39]

Construction Impacts

The construction program for the Proposed Action has been analyzed in regard to potential construction impacts in the following nine areas: soil erosion controls, water quality, wetlands, air quality, noise, solid and hazardous waste, source and quality of materials, socioeconomic impacts, and operation of existing airport during construction. In summary:

- Soil Erosion Controls – Construction activities related to the Proposed Action have the potential to increase soil erosion unless appropriate countermeasures are taken. A detailed, site-specific Erosion and Sedimentation (E&S) Control Plan would be prepared to address all earth disturbance aspects of the proposed improvements. Appropriate implementation of the Soil Erosion and Sedimentation Plan will minimize soil erosion to insignificant levels. Once construction is complete, landscaping techniques will prevent further erosion of disturbed areas.

- Water Quality – Ground disturbing construction activities result in soil erosion that could impact water quality unless appropriate countermeasures are taken. All necessary mitigation actions will be implemented to minimize construction impacts to the Grand Calumet River and groundwater to

[39] Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Phase III Environmental Site Assessment, NBD Bank Trust Property Located Within the Runway Extension Zone Northwest of Gary'Chicago Airport, Gary, Indiana*. November 2003.

ensure compliance with state and Federal water quality standards. In accordance with Rule 5 of IDEM's stormwater program, construction activities involving more than five acres require a NPDES stormwater discharge permit. Since the proposed project will involve greater than 5 acres of construction, the Gary/Chicago International Airport will complete the following tasks in accordance with Rule 5: File a Notices of Intent (NOI) prior to the start of work; file a soil erosion control plan with the Lake County Soil and Water Conservation District; comply with the requirements outlined in the permit; and erect and maintain erosion control fences to prevent soil erosion.

- Wetlands – Filling, grading and paving of wetland areas will occur during the construction elements of the Proposed Action, as identified earlier in this summary. A Clean Water Section 404 permit from the Corp of Engineers is required prior to commencement of any construction activity. Section 404 of the Clean Water Act regulates the discharge of dredged or fill material into all "waters of the United States". The requirement of a Section 404 permit from the Corp of Engineers triggers the need for a Section 401 Water Quality Certification from IDEM, Office of Water Quality. All necessary mitigation efforts will be implemented to minimize adverse impacts (direct and indirect) wetlands as part of the permitting process.

- Air Quality – The construction emissions; resulting from construction equipment and vehicles engine exhausts, fugitive dust, as well as from excavation, demolition, and backfill activities, etc.; were evaluated based on U.S. EPA procedures and following state requirements. The results are compared to the General Conformity Thresholds for various air pollutants. As a result of this construction emissions analysis and all present and future regulations, practices, and construction plans, the construction impacts of the proposed project would be insignificant. Construction schedules, module parameters and phases, construction activities, layout, and work zones, as well as types, sizes, amounts and operating hours, average horsepower (hp) of the construction equipment to be utilized were evaluated based on airport construction engineering data. The CO, SOx, VOC, NOx, and particulates (PM) emissions generated from construction vehicles and equipments were estimated by utilizing the most recent approved U.S. EPA emission factors or NONROAD model for various vehicles and equipment utilized in the construction and remediation estimates. The total air emissions resulting from all construction modules during the most aggressive schedule, years – 2005, 2006, and 2007, were then summed up to determine their impacts and the project conformity during construction period. For all cases examined, the annual emissions resulting from construction equipment and vehicles during year 2005, 2006, and 2007 are below (within) the conformity emission thresholds. The construction emissions will be even lower if Module 5 construction includes Route 1D only or if during the 3-year construction period only the interim Route 1E is constructed due to funding. Therefore, the Gary/Chicago International Airport construction activities will conform to the General Conformity Rules and CAAA requirements. The onsite construction management would be encouraged to include general environmental commitments from contractors and construction activities.

- Noise – Noise levels will increase during construction, however these construction activities are not anticipated to have any significant adverse effect on surrounding land use due to the temporary nature of construction activity and the noise level reductions associated with distance attenuation.

- Solid and Hazardous Waste – Waste generated during construction will consist of both non-hazardous and hazardous waste. Most waste generated during construction will consist of non-hazardous waste. Although specific quantities have not been estimated, construction waste generated may include excavated material from airside perimeter roads, concrete, asphalt, and soil. If remediation efforts are not completed prior to the commencement of construction activities, the remediation action plan (RAP) will need to be reevaluated to determine the impact of the construction on achieving the required cleanup goals. If necessary, the revised RAP will continue once construction is complete. Also, construction activities have the potential to unearth contaminated areas from previous land use. Previously identified areas of contamination and current remediation activity include the Conservation Chemical Company Site and the MIDCO I superfund site. An Environmental Site Assessment conducted by Clean World Engineering identified several contaminated sites within the construction zone of the proposed runway improvements and extension. A remediation action plan has been developed as part of the EIS and will be implemented prior to and along with the Proposed Action as identified in Section 5.19, Hazardous Materials. Special provisions will be included in the construction document to address the potential for encountering hazardous materials. All applicable Federal, state and local regulations will be followed for the cleanup and disposal of hazardous waste during construction activities.

- Source and Quality of Materials – The Proposed Action will require the irretrievable commitment of various construction materials. All use of natural resources will comply with Federal, state and local environmental standards. As site preparation involves grading and filling of project sites, clean fill material will be reused from excavated areas. Asphalt from previous airport construction projects will be reused for the runway extension.

- Socioeconomic Impacts – The proposed construction of the improvements and expansion of the Gary/Chicago International Airport will generate temporary economic benefits to the Gary and Chicago regional economy during the construction phase. The expenditures of Federal, state and local funds upon materials and labor will create direct economic benefits in the region. Indirect benefits will also occur when supplying industries use these initial direct revenues to purchase required goods and services as part of their production process.

- Operation of Existing Airport During Construction – Construction activities will result in short-term impacts to airport operations. Construction details, procedures and equipment will determine the types of temporary operational changes required to complete the runway improvement.

Operational changes may include runway, taxiway and road restrictions and closures. A detailed construction plan will be developed to minimize impacts to airport operations.

MITIGATION

Mitigation measures have been recommended in the following eight environmental categories:

Direct Socioeconomic

In order to address issues of socioeconomic impacts and environmental justice, an extensive public outreach component will provide information about the land acquisition program. Residents living near, but outside of the acquisition area, as well as potential landowners to be acquired will be invited to attend the May 2004 public information meeting/hearing to receive clear information and to receive public input.

Water Quality

Erosion and sedimentation control measures will ensure compliance with the U.S. Environmental Protection Agency document titled *Storm Water Management for Construction Activities* and State of Indiana water quality standards. A detailed, site-specific Erosion and Sedimentation (E&S) Control Plan would be prepared to address all earth disturbance aspects of the proposed improvements.

Best Management Practices will be instituted to control the quality and quantity of stormwater generated by the airport. Due to the sandy soils in the study area, it is not anticipated that stormwater runoff will increase significantly. Additional drainage ditches may be constructed to convey the runoff to existing pipes or ditches. No new outfall would be constructed to the Grand Calumet River. Since minimal flow increases are anticipated, the size of the existing discharge pipes or ditches would not be altered. Therefore, the existing culverts would serve to restrict flows to the river to allow for further infiltration.

Water Quality Permitting and Water Certification

Water resources are protected by Federal and state regulations. The *Federal Water Pollution Control Act*, as amended by the Clean Water Act of 1977, provides authority to Federal, state and local governments to establish water quality standards; control discharges into surface and subsurface waters; develop waste treatment plants and practices; and to issue permits for discharges, including dredged and fill material, into bodies of water. The *Indiana Water Pollution Control Act* provides IDEM authority to enforce the water quality standards and requirements as set forth in the *Water Pollution Control and Clean Water Acts*. This act governs "all waters of any river, stream, watercourse, pond, lake, coastal, ground or surface water, wholly or partially, within the state, natural or artificial," except for privately owned waters. IDEM, Water Quality Division implements its jurisdictional responsibilities under its Water Quality Criteria and Use Classification regulations. The State has also adopted an Antidegradation Policy for water quality. Specific water quality criteria for each use classification include standards for sewage discharge, pH,

temperature, dissolved oxygen, toxic substances, taste and odor attributable to discharges, bacteria, radioactivity, and turbidity.

Due to impacts to the swales and wetlands by the proposed projects and the associated water quality issues, which would result from the proposed development, the following Federal and state permits will be required.

- In accordance with Rule 5 of IDEM's stormwater program, construction activities involving more than five acres require a NPDES stormwater discharge permit. Persons with sites greater than 1 acre but less than 5 acres are "invited to comply with this rule as well."[40] Since the proposed project will involve greater than 5 acres of construction, the Gary/Chicago International Airport will complete the following tasks in accordance with Rule 5: File a Notices of Intent (NOI) prior to the start of work; file a soil erosion control plan with the Lake County Soil and Water Conservation District; comply with the requirements outlined in the permit; and erect and maintain erosion control fences to prevent soil erosion.

- In accordance with Rule 6 of IDEM's stormwater program, NPDES Permit Number INR006051 has been issued to the Gary/Chicago International Airport for vehicle maintenance, repair and fueling, and aircraft deicing operation. In accordance with this permit, a SWPPP was developed for the airport in 1996 and updated in 2000. The proposed changes at the airport would require submission of an amended NOI and SWPPP to IDEM to address the changes.

- The *Fish and Wildlife Coordination Act, Section 2* requires that whenever waters of any stream or other body of water are altered or impounded, consultations with the U.S. Fish and Wildlife Service (USFWS) and the State agency having jurisdiction over wildlife services shall be conducted. These consultations have been initiated during the EIS process and will continue through the design and permitting phase of the project.

- *Section 404 of the Clean Water Act* provides the primary means of Federal protection of Waters of the United States. Section 404 established a permit program for discharges of dredged or fill material to be administered by the U.S. Army Corps of Engineers (Corps). The Corps also employs Sections 9 and 10 of the *1899 Rivers and Harbors Act* to protect navigable and coastal waters and associated wetlands. The Corps' regulations and guidelines for fill placement and other defined activities are contained in *33 CFR Parts 323 through 328* and *Part 330*. In addition, the Corps has issued Regulatory Guidance Letters to clarify certain aspects of the program. The Corps issues both individual and nationwide permits for wetland and waterway impacts. The nationwide permits are generic permits for categories of projects, such as utility crossings and hazardous waste

[40] Indiana Administrative Code. Rule 5, 327 IAC 15-5-1. August 1, 2003.

remediation, which the Corps deems to have minimal impacts to wetlands. Due to the wetland and swale impacts of the proposed project, an individual permit will be required from the Corps.

- Under *Section 401 of the Clean Water Act*, projects involving discharges to waters of the United States, including wetlands, must obtain certification from IDEM that the project will not adversely impact the quality of the State's waters. Compliance with IDEM's Anti Degradation Rules would also be required for the build alternative.

Coordination is currently ongoing with IDEM and the Corps. Applications for the required permits will be formally submitted to IDEM and the Corps during the design phase of the project.

Biotic Communities

Impacts to the biotic communities in the study area from the proposed alternative would predominantly be to the vegetation and wildlife of wetlands. Proposed mitigation for these impacts is described conceptually in Section 5.11, Wetlands and Streams, of this EIS.

Threatened and Endangered Species

Impacts to the two state-endangered and two state-rare plant species (sticky goldenrod, Baltic rush, Bicknell Northern Crane's Bill and prairie goldenrod) and one state herpetofauna species of concern (Northern cricket frog) would be mitigated by the preservation or creation of dune and swale habitat as described in the mitigation concept presented in Section 5.11, Wetlands and Streams, of this EIS. Opportunities to introduce these species to preserved or created habitats will be explored.

Wetlands and Streams

The concept for mitigating the wetlands on the airport is to categorize the impacted wetlands as either remnant dune and swale wetlands or other, non-dune and swale wetlands. While the replacement ratio would most likely be based upon the quality of the disturbed wetlands, the location for the mitigation process would be based upon whether the wetland is remnant dune and swale or not.

Under the mitigation concept proposed in this section, mitigation for the wetlands at the airport that have significantly lost their dune and swale characteristics should be considered at the Lake Station Mitigation Bank. Though not a dune and swale wetland restoration, the Bank has created approximately 200 acres of contiguous wet prairie and emergent wetland community adjacent to the Little Calumet River.

Other potential restoration areas would be identified with remnant dune and swale habitats to meet the mitigation requirements for disturbed wetlands that have not significantly lost their dune and swale characteristics. Potential mitigation areas for the Gary/Chicago International Airport Proposed Actions have

been explored throughout the Northwest Indiana region. Because the FAA requires that mitigation not take place within 10,000 feet of the airport (due to the potential to create new wildlife attractants, which are considered unsafe to an airport operating environment), a substantial number of the potential sites must be excluded. Parcels have been explored beyond the 10,000 linear foot radius suggested by the FAA. All of these parcels contain remnant dune and swale habitats that would involve varying levels of restoration activities. These activities could include trash removal, exotic species control, earthmoving and prescription burning.

The proposed concept for identifying an acceptable mitigation location would be to prioritize and then pursue those areas that meet all of the goals for the mitigation program: available for restoration and preservation as a remnant dune and swale site, acceptable as a location to meet wetland mitigation goals (in terms of quality of wetlands), and meeting the FAA's requirements for a compatible location as it relates to the airport operational safety requirements. In addition, before selecting any mitigation sites historic and hazardous material assessments will be conducted as needed to meet regulatory guidance in determining if there would be any potential significant negative impacts associated with that mitigation location. Also, aesthetics will be considered when designing the mitigation area activities.

Remnant Dune and Swale Wetlands

Five potential mitigation sites have been identified that are remnant dune and swale communities and are outside of the 10,000-foot mitigation exclusion zone.

Compensatory mitigation for functions and values of impacted dune and swale wetlands could take several forms. Primary of these should be enhancement and preservation of existing habitats. Many of the functions and values that make these habitats unique are progressively lost as the plant community degrades with the lack of fire and invasion by non-native species. Enhancement, management, and preservation of these areas have the capacity to restore these lost functions and values. The physical restoration to a wetland condition of filled swales should also be a part of a final mitigation plan. However, the recreation of swale wetlands in this context has not been widely successful or even attempted. Given this uncertainty, mitigation should focus on restoration, enhancement and preservation of existing remnants rather than creation. Priority should also be given to those remnants that are adjacent to or nearby existing habitats so that they will be less susceptible to extinction events. Smaller, isolated parcels have a much lower ability to be self-sustaining and maintain biodiversity. Alternatively, parcel(s) could be large enough to be able to maintain biodiversity without the benefit of other nearby natural areas.

In developing the final mitigation plan it should also be recognized that swale wetlands could provide only a fraction of their functions and values in isolation of associated dunes. Geologically and biologically dunes and swales are tied together. The mitigation plan should therefore include restoration and enhancement of adjacent dunes. This also provides the potential to enhance habitat for the benefit of Federally endangered Karner blue butterfly. The host plant (wild lupine,

Lupinus perennis) for this butterfly is only found in open, sunny dune habitats. Lupine, and thus Karner blue butterflies, are exclued from sites that become overgrown with trees, brush and thick vegetation when fire is excluded. Where fire cannot be reintroduced as a management tool to encourage lupines, open conditions can be created by mechanical means such as mowing or brush removal. Limited, seasonal mowing can remove unwanted vegetation while leaving the lupine unharmed.

Non Dune and Swale Wetlands

The approximately 10.8 acres of non dune and swale wetland within the expansion area do not support the functional characteristics of dune and swale communities and have, for the most part, become established on unnatural terrain that resulted from the construction and subsequent dismantling of the petroleum storage tank facility. In many cases the substrate is so compromised by petroleum wastes and chemical products that little to no vegetation can survive. Should compensatory mitigation be required for these wetlands, credits could potentially be purchased from the Lake Station Mitigation Bank. This mitigation bank has been approved to sell credits for impacts to wetlands in the Little and Grand Calumet River watershed though approval must be gained from IDEM and the Corps of Engineers on a case-by-case basis. The bank's charter specifically states that the bank may not be used to mitigate for dune and swale wetlands. Purchase of credits at a wetland mitigation bank would free the airport from any further obligation or liability.

Floodplains

During the design phase, IDNR, Division of Water, will be contacted to determine whether the existing culverted condition of the small portion of the 100-year floodplain shown on the FEMA map within a construction area northwest of Runway 12 would preclude it as being determined as a floodplain. The project design will also clarify if the relocation of Runway 12-30 navaids or acquisition of land southeast of the Gary/Chicago International Airport will require construction within existing floodplains.

If IDNR determines that the small portion would still be considered floodplain or the final design plans for either of the two aforementioned improvements require construction within existing floodplains, then the proposed project will be directly impacting floodplain areas. Since the floodway and floodway fringe are not defined on the current FEMA Map for the study area, the Gary/Chicago International Airport would request a floodplain analysis from the IDNR, Division of Water, and follow any necessary, subsequent steps as outlined in Section 5.12, Floodplains, of this EIS. Any floodplain permit applications submitted prior to the official authorization of the completed revised maps by FEMA will be based on the most recent FEMA Map for the study area, which was used in this EIS[41].

[41] Federal Emergency Management Agency, Region V. Personal communication with Mary Jo Mullen. December 15, 2003.

If IDNR determines that the small portion of the 100-year floodplain shown on the FEMA map within a construction area to the northwest of Runway 12 is no longer floodplain and the relocation of Runway 12-30 navaids and acquiring land southeast of the Gary/Chicago International Airport (20 acres) do not call for construction within existing floodplains, then the Gary/Chicago International Airport would only request that the local inspector sign off that all floodplain requirements have been met for the project.

Hazardous Waste

The following recommendations have been made in regard to cleanup actions that should occur at the time of the Proposed Action:

Additional Phase II Procedures

At the time of acquisition of parcels where RECs were identified but permission was not granted for the access needed to complete a Phase II, additional Phase II/III procedures should be conducted as required to either document that the site will not require cleanup or to prepare a Remediation Action Plan (RAP). These parcels can be divided into three groups:

- Parcels located northwest of the runway that are located within the construction limits for the runway improvements and expansion actions, and will be disturbed. These parcels include the railway right-of-way and three other parcels. Phase II/III activities will be pursued immediately.

- Parcels located northwest of the runway that are needed to assemble land for the long-term passenger terminal area. The Phase II/III procedures will be conducted as a part of the acquisition process, with cleanup to occur prior to development activities.

- Parcels located southeast of the runway that will be purchased as funds and availability allow. Only one parcel in this area, which is currently being used for an industrial use, will require further Phase II analysis prior to acquisition.

Submittal of Remediation Action Plan

A conceptual remediation plan has been developed as a part of the preparation of the EIS. A Remediation Action Plan (RAP) will be submitted for approval once the Proposed Action is imminent so that the cleanup activities can occur immediately upon the acceptance of the RAP.

Soil Mitigation Actions

Benzo(a)pyrene concentration in surface soil samples SB1, SB4, and SB9 has been detected above the RISC closure level for industrial land use. Although land farming has been carried on for major hazardous components, some remedial actions are still required. The remaining thick and black suspect tank bottoms should be scraped and removed from the area. The abandoned drums should also be removed and disposed in an environmentally acceptable manner. Excavation and disposal or

land farming are considered viable alternatives. Moreover, considering the site geologic characteristics and the portion of this are is directly in the path of the runway extension and location for FAA navigational equipment, it is the opinion of the environmental consultants, Clean World Engineering, Ltd. (CWE), that the unconsolidated solid material will need to be removed, at least to a certain depth, and replaced with clean fill to provide adequate soil mechanical properties as part of the future use of the property.[42] The soil excavated will either be land farmed or, where necessary, disposed of at a licensed hazardous waste disposal facility. The areas which will be serviced by FAA personnel in the future should be cleaned to above closure level for residential land use.

- An additional subsurface investigation should be performed at the properties (Western Scrap Corporation) northeast of the NBD Bank Trust Property (up-gradient) to assess the background levels of contaminants in soil and groundwater.

- Although land farming has been carried out for major hazardous components, some remedial action is still required for surfacial contamination. The thick and black oily sludge should be scrubbed and removed from the NBD Bank Trust Property.

- The drums at the NBD Bank Trust Property should also be removed and disposed of in an environmentally acceptable manner.

- Excavation and disposal or land farming are considered the viable methods of soil remediation. Moreover, considering that the NBD Bank Trust Property geologic characteristics, the portion of the property within the construction limits will require removal at least to a certain depth and replacement with clean fill to provide adequate soil mechanical properties.

- The NBD Bank Trust Property should be fenced or properly secured to prevent exposure to the general public and illegal dumping.

Groundwater Mitigation Actions

Based on the existing site conditions and laboratory data, the NBD Bank Trust Property is contaminated with metals and organic compounds. The concentrations of organic compounds and heavy metals in the groundwater exceeded the IDEM RISC closure levels for residential land use. Concentrations of some organic compounds and heavy metals have exceeded the IDEM RISC closure levels for industrial land use. The presence of contaminants in the groundwater samples at the boundary of the property downstream indicates the contaminants may have migrated off-site.[43]

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[42] Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Conceptual Remediation Plan NBD Bank Trust Property Located within the Runway Extension Zone Northwest of Gary/Chicago Airpor*t, Gary, Indiana, November 2003.

[43] Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Conceptual Remediation Plan NBD Bank Trust Property Located within the Runway Extension Zone Northwest of Gary/Chicago Airpor*t, Gary, Indiana, November 2003.

- Groundwater sampling should be performed at the monitoring well at the Conservation Chemical Company property. The sampling will assess the progress of remedial action for the extraction of free product being conducted by U.S. EPA Region 5 at the Conservation Chemical Company property.

- The implementation of groundwater treatment system using six extraction wells at the Conservation Chemical Company Site will prevent the offsite migration of contamination into the NBD Bank Trust Property. Furthermore, the placement of the sixth extraction well at the EJ&E Railway right-of-way has a zone of influence over the eastern boundary of the site.

- Implementation of a treatment system such as hydraulic barriers will prevent further migration of contaminated groundwater offsite toward the Grand Calumet River.

- The Remedial Action Plan for the site should be submitted to IDEM to reduce the contaminants at the NBD Bank Trust Property and to prevent offsite migration of the groundwater.

Groundwater remediation will be accomplished with 8-10 vertical extraction wells. Extraction wells of 6 inches in diameter will be installed at the southern boundary of the property using conventional techniques. Pneumatic, submersible, ejector pumps will be installed inside the extraction wells. The aboveground treatment system for extracted groundwater, such as activated carbon of sufficient size, should work to process the volume of water extracted.

Disposition of treated groundwater will depend on the cost. Re-injection is an option and it makes good technical sense without causing adverse impact on the receiving groundwater table at the site. Groundwater treatment at the site can be combined with the ongoing treatment process at the adjoining properties. Groundwater remediation at the adjoining Conservation Chemical Company site has been implemented using six extraction wells and an infiltration gallery. In addition, groundwater remediation utilizing a groundwater extraction and treatment system has been ongoing at the Midco II located northwest across the Gary/Chicago International Airport. The treated water is being transported to the Midco I site located at 15th Street in Gary, where it is pumped into a deep injection well.[44]

[44] Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Conceptual Remediation Plan NBD Bank Trust Property Located within the Runway Extension Zone Northwest of Gary/Chicago Airpor*t, Gary, Indiana, November 2003.

The pump and treat system for this particular application will have the following characteristics:

- Each extraction well will consist of pre-packed well screens, casing, risers, pneumatic pumps and well vault.
- An oil-water separator will be used to separate any oil from groundwater extraction wells.
- HSA will be employed to drill the boring.
- Piezometers will be installed around the site to permit evaluation of the extent of the capture.
- A groundwater treatment system using granular activated carbon unit will be installed after conducting pilot studies.

Off-site migration of contaminated groundwater has been identified as an important factor; therefore, control of soil water movement will be implemented unless it can be confirmed that no new contaminants are being introduced within the up-gradient watershed boundary. Although physical barriers like low permeability barrier (slurry wall) or hydraulic barriers (pumping system) have been considered to prevent off-site migration of containment plumes and remove or separate contaminants from the media, these measures will only be used if absolutely necessary to meet the cleanup objectives established for the NBD Bank Trust Property.

As needed, permits for installation, operation and maintenance of the remedial system will be obtained. Before any groundwater extraction work the existence and location of underground utility lines will be determined and, during the extraction process, they will be rerouted temporarily or permanently if necessary.

Verification of Completion of Remediation

A media sampling plan will be implemented to verify completion of remediation. Following the completion of groundwater extraction activities, groundwater samples will be collected in the locations previously sampled. Additional groundwater samples will be collected from the locations south of the NBD Bank Trust Property if off-site access is obtained.[45]

Following the collection of confirmatory groundwater samples the site data will be evaluated using IDEM RISC closure values to assess the site status regarding additional remediation closure.

[45] Gary/Chicago Airport Authority, prepared by Clean World Engineering, Ltd. *Conceptual Remediation Plan NBD Bank Trust Property Located within the Runway Extension Zone Northwest of Gary/Chicago Airpor*t, Gary, Indiana, November 2003.

Construction Impacts

In order to minimize construction impacts, the Proposed Action will include the following pollution control measures:

- A detailed, site-specific E&S Control Plan will be prepared to address all earth disturbance aspects of the Proposed Action.

- The airport will follow the requirements of NPDES Stormwater Permit, State of Indiana IDEM Rule 5, including filing a Notice of Intent prior to the start of work, filing a Soil Erosion Control Plan with the County Soil and Water Conservation District, complying with the requirements in the permit to prevent soil erosion, and publishing a notice of planned construction activity in a local newspaper of general circulation.

- A variety of control measures will be implemented to minimize fugitive dust emissions, including the use of water or other appropriate liquids to control dust during land clearing, grading and construction operations; tarp covers on trucks to transporting construction materials to and from the site, the wetting of unpaved roadways and material stockpiles, removing loose material, vehicle cleaning, and landscaping of disturbed areas.

- Care will be taken when identifying haul routes and construction activity hours to avoid residential areas in order to minimize noise impacts.

- Because of known contamination sites within the study area, special provisions will be included in the construction document to address the potential for encountering hazardous materials. All applicable Federal, state, and local regulations will be followed for the handling cleanup and disposal of hazardous waste during construction activities.

CUMULATIVE IMPACTS

In Chapter 6, Cumulative Impacts, of this EIS, the projects identified as having the potential for cumulative impacts near the Gary/Chicago International Airport have been reviewed with the following finding: With mitigation measures in place, the environment in the area is improved as a result of mitigation associated with the completion of these projects.

Wetlands impacts are associated with the improvements proposed and recently completed at the Gary/Chicago International Airport and from improvements to the Indiana Toll Road. Mitigation measures are already in place for the wetlands disturbed by the Indiana Toll Road. Mitigation will occur for the wetlands disturbed by the construction of the Boeing Hangar at Gary/Chicago International Airport, wetlands impacted by the ramp construction being proposed east of the existing NIPSCO hangar, and with improvements to the airport being addressed by this EIS. Some natural re-vegetation of wetlands is likely to occur as a result of culverting some open drainage outlets.

There will be some short-term impacts to the local air and water quality and some noise impacts that will result from construction activities associated with the projects identified as cumulative impacts. None of the projects reviewed as cumulative impacts show significant negative impacts to air quality. Improvements to the Gary/Chicago International Airport have been shown to result in long-term improvements to the water quality of the area. A net reduction of residences impacted by noise is expected as a result of the Proposed Action.

In all cases, the projects reviewed as cumulative impacts will result in the creation of jobs that are likely to employ minority and low-income populations during construction, and overall will result in the long-term potential for enhancements to the Gary/Chicago regional area tax base through the creation of jobs and consumer spending.

Other projects of interest, including the Chicago Terminal Airspace Project and the National Airspace Review are likely to reduce the airspace complexity in the area surrounding the Gary/Chicago International Airport. The same is true of options identified to improve the operating efficiency and reduce delays at Chicago O'Hare International Airport.

Reviews of other airports in the area indicate that as commercial services increase at Chicago Midway International Airport, general aviation activities have been displaced to Gary/Chicago International Airport. Gary/Chicago International Airport also has an agreement with Untied Airlines at Chicago O'Hare to accept aircraft flight diversions. These displacements/diversions result in increased utilization of the both the runway and passenger facilities at the Gary/Chicago International Airport.

PUBLIC INVOLVEMENT

Two public information meetings (January 15, 2002 and March 4, 2003) have been held with the general public during the course of the preparation of this EIS. Four agency and/or environmental interest group briefings (January 15, 2002; July 19, 2002; February 24, 2003 and October 21, 2003) have also been held since the initiation of the Scoping process for this EIS.

A public information meeting/hearing will be held at the Gary/Chicago International Airport passenger terminal on Tuesday, May 25, 2004. This meeting will commence at 3:00 p.m. and is scheduled to end at 7:00 p.m. In order to address issues of socioeconomic impacts and environmental justice, an increased public outreach component will provide information about the land acquisition program. Residents living near, but outside of the acquisition area, as well as potential landowners to be acquired will specifically be invited to attend the May 25, 2004 public information meeting/hearing to receive clear information and to encourage public input.

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